

SRDS Report No. RD-69-22, VOL. (2)

FINAL REPORT

Contract No. FA-67-WA-129

Project No. 197-641-01R

CLIMATOLOGICAL SUMMARIES

VISIBILITIES BELOW 1/2 MILE
AND CEILINGS BELOW 200 FEET

VOLUME 2

ATLANTA AIRPORT

ATLANTA, GEORGIA

JUNE 1969

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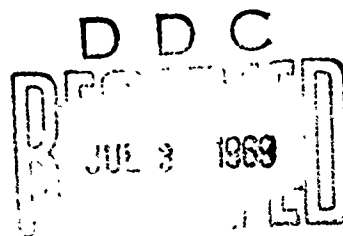
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U.S. DEPARTMENT OF COMMERCE
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AND CEILINGS BELOW 200 FEET**

JUNE 1969

This report has been prepared by U.S. DEPARTMENT OF COMMERCE, Environmental Science Services Administration, Environmental Data Service, National Weather Records Center, Asheville, N.C. for the Systems Research and Development Service, Federal Aviation Administration, under Contract No. FA-67-WAI-129. The contents of this report reflect the views of the contractor, who is responsible for the facts and the accuracy of the data presented herein, and do not necessarily reflect the official views or policy of the FAA. This report does not constitute a standard, specification or regulation.

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Each with four sections:

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2. 1400-2159 Local Standard Time
3. 2200-0659 Local Standard Time
4. All Hours

XII	All conditions.	20
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INTRODUCTION

The tables contained herein have been prepared and organized for use in evaluating the cost/benefits of all weather landing systems and fog dissipation techniques. Thus, the time intervals of duration of the categories of weather are significant in determining the times of the delay, diversion or cancellation of an aircraft flight resulting from a restricted weather category. This information together with the number and types of aircraft affected by the restricted weather and the costs of a delay, diversion or cancellation combine to provide the total costs resulting from the weather restrictions.

Climatological summaries have been prepared for 41 airports. Their location and associated volume numbers are listed in Table A.

ATLANTA, GEORGIA

ATLANTA AIRPORT

The Atlanta Municipal Airport is located near the southern tip of the Appalachians at an elevation of about 1005 feet above MSL. The terrain is characterized by wooded, hilly country which slopes downward in all directions except to the north and northwest. The foothills of the Appalachians start about 80 miles to the north. This range produces a foehn effect on air that has had a trajectory from the north and results in rapid dissipation of fog and stratus or post-cold frontal clearing. On the other hand, air with a trajectory from any other quadrant, particularly southeast, is subjected to orographic lifting that is favorable for stratus formation.

The tables in this publication are based on the 10-year period, January 1, 1956-December 31, 1965. Ceilometer measurements of ceiling height began May 17, 1949. Transmissometers (500 ft. baseline) were commissioned on runway 09R December 3, 1965, and on runway 33 June 29, 1965, decommissioned August 30, 1965, then recommissioned (250 ft. baseline) November 14, 1965.

<u>From</u>	<u>To</u>	<u>Lat. N.</u>	<u>Long. W.</u>	<u>Height of Wind Instrument Feet above ground</u>	<u>Station Elevation Feet above MSL</u>
1- 1-56	12-31-61	33° 39'	84° 26'	72	975
1- 1-62	7-31-62	32° 39'	84° 26'	20	975
8- 1-62	12-31-65	33° 39'	84° 26'	20	1005

NATURE OF DATA

The data used in the preparation of the climatological tables were extracted from 10 years of WBAN 0-A forms from January 1956 through December 1965. There were two exceptions: The data for Dulles International covered the period January 1963 through December 1965 and for Kansas City-Mid-Continent the period July 1957 through December 1965. All data (Record, Special, Local, Check observations)* were recorded on punched cards to the hour and minute whenever a change occurred in the ceiling, surface visibility, present weather, runway visual range or runway visibility during the time the ceiling was less than 200 feet and/or the surface visibility was less than 1/2 mile. The observation which ended a category of the above conditions was punched and if this observation was not a Record observation, the next Record observation was punched. The elements transcribed were: the time in hours and minutes, ceiling, surface visibility, tower visibility, present weather, temperature, dew-point, surface wind, altimeter setting and remarks concerning runway visual range and runway visibility.

These data should prove to be a valuable source for additional studies where low visibilities are considered.

Runway visual range (RVR) is the operational weather criteria for airport landing systems. The limits of visibility conditions for categories of aircraft operations are presented in Table B. Only Cat. II criteria are currently operational. Because RVR as such, is not available on a uniform basis for the station and period of record under study, visibilities and ceilings were used for delineating categories of weather minimums for landing and take-off operations. The determination of RVR would require:

1. The light setting of the edge lights,
2. the background lighting,
3. the location with respect to runway,
4. a special analyzer to integrate the transmissiometer readings etc.

This information has not often been recorded with the transmissiometer data.

* Except Kansas City - Mid-Continent. Only Record (hourly) observations were taken during the period of record at this station; 16 hours per day (0700-2200) through November 1957 and 24 hours per day December 1957 through December 1965.

EXPLANATION OF TABLES

All the tables of climatological summaries except Table I are based on the reported visibilities of less than 1/2 mile and/or ceilings less than 200 feet.

The tables of climatological summaries in these publications include:

- (1) reported visibility and ceiling values versus time intervals of duration.
- (2) weather categories of aircraft landing systems based on their relationship to ceiling and visibility as presented in Table C, versus intervals of duration. This is Table X only.
- (3) percentage frequency of wind direction versus wind speed for each category of aircraft landing system using the relationship of Table C for Record observations only. These are presented for 13 stations only. This is Table XI only.*
- (4) weather categories of landing systems based on their relationship to ceilings and visibility as presented in Table E, versus intervals of duration. These tables are also summarized on the basis of wind speed and temperature values.

* These stations are:

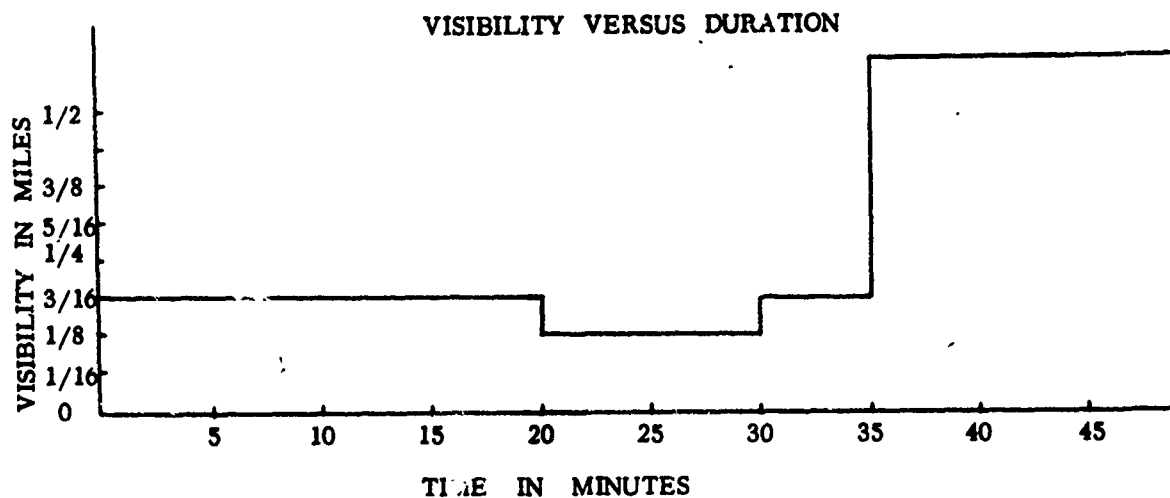
Los Angeles International, Oakland International, Chicago O'Hare, San Francisco International, Greater Buffalo International, Washington National, Washington Dulles International, Atlanta, Newark, New York J. F. K., Philadelphia International, New York La Guardia, Cleveland Hopkins International

REPORTED VISIBILITY AND CEILING VALUES VERSUS INTERVALS OF DURATION

Nine summaries are presented. In Tables I - V the values represent the individual incidents of specified ceiling and visibility. Thus, in Table III 3/8 mile visibility with 100 ft. ceiling occurs with a specific frequency for each interval of duration.

In Tables VI to IX, the frequency of occurrence represents visibilities for specific conditions of ceilings at or below the listed visibility. They are cumulative incidents wherein the total time at or below a certain visibility value for the ceiling value specified is considered as one incident. Thus, if in Table VII there are 172 incidents of 3/8 mile in the interval of 1-15 minutes, it represents 172 times during the 10-year period that visibilities 3/8 mile or less with ceilings 100 feet.

Another example which combines the entries in the individual and the cumulative tables is as follows: If visibility is distributed as shown in the figure, for ceiling 100 feet, if for 20 minutes the visibility was 3/16 then went to 1/8 for 10 minutes, then went to 3/16 for 5 minutes and then to greater than 1/2 mile visibility in Table III there would be 2 counts for 3/16, one under 16-30 minutes and one under 1-15 minutes; and one count for 1/8 under 1-15 minutes; whereas, in the cumulative table for visibilities at or below a given visibility with 100-foot ceilings - Table VII in the 3/8, 5/16, 1/4 and 3/16 mile categories there would be one count under 31-45 minutes (actually 35 minutes) and one count in 1/8 mile category under 1-15 minutes (actually 10 minutes).



To estimate the total time of occurrence for a particular interval of time for the period of record one multiplies the average of time period by the frequency of occurrence of the specified conditions for this time period. Thus, if visibility of 3/8 mile with ceiling 100 feet (Table III) occurred 14 times between 16-30 minutes, the estimated total time would be 14 x 23 or 322 minutes.

WEATHER CATEGORIES OF AIRCRAFT LANDING SYSTEMS VERSUS INTERVALS OF DURATION BASED ON TABLE D

A single table (Table X) based on Table C for the period of record is presented. Table C is based on the current practices relating RVR to meteorological visibilities as shown in Table D.

Table X is in three sections:

Xa. Frequency of occurrence of the landing categories versus the indicated duration intervals:

In this summary Categories II, IIIa, IIIb, and IIIc are represented by the frequency of these conditions occurring during the specified intervals.

In Category II + III the frequency represents the visibilities and ceilings at or below Category II weather, i. e., below 200 feet and/or 1/2 mile for a continuous period of time.

In Category III, the number of occurrences represent the frequency the weather was in in Category IIIa and IIIb/c i.e., observation below 1/4 mile and equal to and above 1/4 mile when the ceiling is reported as zero for a continuous period of time.

Xb. Total time in each duration versus the duration intervals in hours and tenths of hours. The entries in this table are arrived by adding the times in minutes associated with the frequencies above. These totals are converted to hours and tenths. This table also contains the percentage of time for the 10-year period of observations of specified duration intervals, i. e., 1-90, 91-all, 1-all. This table is derived by dividing the total time under each category for the specified duration interval by the total number of hours. Thus the percentage value for Category II + III the 1-all group (last column, 4th value down) represents the frequency of occurrence for the ten-year period in percent of visibility and ceilings below 1/2 mile and/or 200 feet.

Xc. Average time in each duration versus the duration intervals.

This table is derived by dividing the total time in minutes of each item in Table Xb by the frequency of occurrence in Table Xa.

WIND DIRECTION VERSUS SPEED BY PERCENTAGE FREQUENCY (Table XI)

Table XI (for 13 stations) (unnumbered on summaries) show the percentage distribution of the different categories in accordance with Table D by wind direction to 16 points versus specified speed intervals. These categories, II, IIIa and IIIb/c, are divided into 2100-0500 and 0600-2000 hour groups making a total of six sub-tables.

Only the hourly (Record) observations when Category II or below conditions exist are used in these summaries. The percentages are determined by dividing the number of hourly observations which were recorded during the entire period of record for the indicated hour group. The percentage figures can be combined to obtain percentages for the quadrants of different speed intervals.

WEATHER CATEGORIES OF LANDING SYSTEMS VERSUS INTERVALS OF DURATION BASED ON TABLE E

Nine tables XII - XXI are presented for the ten-year period. These tables are presented in three sections:

a. Frequency of occurrences of landing categories versus duration intervals:

Categories II, IIIa, IIIb, and IIIc are represented by the total time for the specified hour group that these conditions occur during the indicated intervals.

In Categories II + III the frequency represents the visibilities and ceilings at or below Category II weather e. g., below 2400 RVR. In Category III the frequency represents the visibilities at or below Category III weather e. g., below 1200 RVR.

b. Total time in each duration versus the duration intervals hours and tenths,

The entries in this table are derived by adding the time in minutes associated with the frequency above and converting them to hours and tenths.

c. Average time in each duration versus the duration intervals.

This table is derived by dividing the total time in minutes of each value in b by the corresponding frequency of occurrence in a.

In these tables, since the period of duration is the important element, each incident of weather is attributed to the hour group during which it began. Thus, if Category IIIa weather began in the 22-06 hour group and continued into the 07-13 hour group the total time is placed in the 22-06 group. It is probable, then, that the incidence of the various categories may be over-estimated in the 22-06 group. The totals appearing in the all hour group, however, are correct.

The sum of Categories IIIa, IIIb, and IIIc in the all-hour groups and sometimes in the other hour groups are frequently greater than under Cat. III. This results from the addition of 5% of observations of 3/16 mile or greater with ceiling 100 feet added to Cat. IIIa, whereas, this 5% is not included in the Cat. III totals at the bottom of each table.

The difference between Cat. III totals and the sum of Cat. IIIa, IIIb, and IIIc are subtracted from the Cat. II totals for the all-hour group and appears at the end of the Cat. II line with an asterisk. This value is a better estimate of the occurrence of Cat. II weather for the 10-year period.

EXPLANATION OF TABLE E

The relationship of RVR with light setting 5 for a 500' baseline to the meteorological report of visibility, based on the information in Circular N^{1/}, is given in Table F. This was the basis for establishing the relationships in Table E. The use of the highest setting for the edge lights for approaches in low visibility is the current operational practice. Although the selection of some of the relationships in Table E have been somewhat arbitrary, it can be expected that the observers report of low visibilities and ceilings will be more inexact than the cut off point of these relationships.

^{1/} Manual of Surface Observations (WBAN). Circular N, Weather Bureau, Washington, D. C. NAVAIR 501D505, July 1968 (AD672-366)

ACKNOWLEDGEMENTS

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This is one of 41 volumes of Report RD-69-22. The volumes are as follows:

<u>VOL.</u>	<u>CITY</u>	<u>AIRPORT</u>
1.	Anchorage, Alaska	International
2.	Atlanta, Georgia	Atlanta
3.	Baltimore, Maryland	Friendship International
4.	Birmingham, Alabama	International
5.	Boston, Massachusetts	General E. L. Logan International
6.	Buffalo, New York	Greater Buffalo International
7.	Burbank, California	Hollywood-Burbank
8.	Chicago, Illinois	O'Hare International
9.	Cincinnati, Ohio	Greater Cincinnati
10.	Cleveland, Ohio	Cleveland-Hopkins International
11.	Columbus, Ohio	Port Columbus International
12.	Dallas, Texas	Love Field
13.	Dayton, Ohio	James M. Cox Municipal
14.	Denver, Colorado	Stapleton International
15.	Detroit, Michigan	Detroit Metropolitan-Wayne County
16.	Hartford, Connecticut	Bradley International (Windsor Locks)
17.	Houston, Texas	William P. Hobby
18.	Indianapolis, Indiana	Weir Cook
19.	Kansas City, Missouri	Mid-Continent International
20.	Los Angeles, California	International
21.	Louisville, Kentucky	Standiford Field
22.	Miami, Florida	International
23.	Milwaukee, Wisconsin	General Mitchell Field
24.	Minneapolis, Minnesota	Minneapolis-St. Paul International
25.	Nashville, Tennessee	Metropolitan
26.	Newark, New Jersey	Newark
27.	New Orleans, Louisiana	International
28.	New York, New York	John F. Kennedy International
29.	New York, New York	La Guardia
30.	Oakland, California	Metropolitan Oakland International
31.	Philadelphia, Pennsylvania	International
32.	Pittsburgh, Pennsylvania	Greater Pittsburgh International
33.	Portland, Oregon	International
34.	Rochester, New York	Rochester-Monroe County
35.	St. Louis, Missouri	Lambert-St. Louis Municipal
36.	Salt Lake City, Utah	Municipal No. 1
37.	San Francisco, California	International
38.	Seattle, Washington	Seattle-Tacoma International
39.	Syracuse, New York	Clarence E. Hancock
40.	Washington, D. C.	Dulles International
41.	Washington, D. C.	National

TABLE A

LIMITS OF LANDING CATEGORIES

- * CAT. II Operations down to minima below 200 feet decision height and 2400 RVR and to as low as 100 feet decision height and 1200 RVR.
- ** CAT. IIIA Below 100 feet decision height and 1200 RVR and to as low as 50 feet decision height and 700 RVR.
- ** CAT. IIIB Below 700 RVR to 150 RVR.
- ** CAT. IIIC No external visual reference.

TABLE B

- * Current operational criteria
- ** Criteria not firm, used for planning purposes

**CEILING AND VISIBILITY EQUIVALENTS FOR CATEGORIES
OF AIRCRAFT LANDING OPERATIONS CURRENT PRACTICE
CRITERIA for Table X and XI**

Category II:	Visibility = 1/2 and ceiling = 100
	Visibility = 3/8 and ceiling \neq 0
	Visibility = 5/16 and ceiling \neq 0
	Visibility = 1/4 and ceiling \neq 0
Category III-a:	Visibility = 1/4 and ceiling = 0
	Visibility = 3/16 and all ceilings
	Visibility = 1/8 and all ceilings
Category III-b/c:	Visibility = 1/16 and all ceilings
	Visibility = 0 and all ceilings
Category III:	The sum of IIIa, IIIb, and IIIc

TABLE C

RVR VERSUS VISIBILITY (Current Practice)

METEOROLOGICAL VISIBILITY	RVR EQUIVALENT
Statute Miles (feet)	Feet
3/16 (990 feet)	1200
* 1/4 (1320 feet)	1600
* 1/2 (2640 feet)	2400

TABLE D

* United States Standard for Terminal Instrument
Procedures (TERPs), Federal Aviation Agency, September 1966.

**CEILING AND VISIBILITY EQUIVALENTS FOR
CATEGORIES OF AIRCRAFT LANDING OPERATIONS
Criteria for Tables XII-XXI**

Category II
Below 2400 ft. RVR to
1200 ft. RVR

Equivalent Meteorological Observations

All observations with visibilities greater than
3/8 mile with ceiling 100 feet.

All observations of 3/8 mile with ceiling not
equal to zero.

All observations of 5/16 mile with ceiling not
equal to zero.

All observations of 1/4 mile with ceiling not
equal to zero.

All observations of 3/16 mile with ceiling not
equal to zero.

Category III
Category IIIa
Below 1200 ft. RVR to
700 ft. RVR

All observations of 1/8 mile.

All observations of 3/16 mile or greater with
zero ceiling.

5% of observations of 3/16 mile or greater with
ceiling 100.

Category IIIb
Below 700 ft. RVR to
150 ft. RVR

All observations of 1/16 mile.

50% of all observations of zero miles.

Category IIIc
Below 150 ft. RVR

50% of observations of zero miles.

TABLE E

RVR VERSUS METEOROLOGICAL VISIBILITY

Circular N

Reported Meteorological Visibilities Miles (feet)	RVR (500 ft. baseline) at Setting 5		Category
	Day	Night	
0 (less than 330 feet)	*	*	(IIIc and IIb)
1/16 (330 feet-650 feet)	*	*	(IIIb)
1/8 (660 feet-980 feet)	1000-1400	*	(IIIb and IIIa)
3/16 (990 feet-1310 feet)	1400-1800	1200-1800	(Cat. II)
1/4 (1320 feet-1640 feet)	1800-2200	1800-2200	(Cat. II)

* No determination of RVR with respect to meteorological visibility.

TABLE F

ATLANTA, ATLANTA

FREQUENCY OF INTERVALS OF DURATION VERSUS CATEGORIES OF VISIBILITIES

JANUARY 1956 - DECEMBER 1965

TABLE I. VISIBILITY $\geq 1/2$ MILE WHEN CEILING < 200 FEET.

DURATION IN MINUTES											
1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	
289	160	88	63	52	26	11	10	1	2		

TABLE II. (IRRESPECTIVE OF CEILING).

DURATION IN MINUTES											
VISIBILITY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
3/8	72	39	11	3	2	2	2				
5/16	34	12	6	3	2						
1/4	247	111	72	37	30	27	22	10	2	4	1
3/16	43	24	14	10	8	2	4	1		1	1
1/8	37	47	31	18	26	14	24	13	13		8
1/16	12	6	6	7	9	3	4	1	2	2	
0	2	1	4		1	1	3		2	1	

TABLE III. (CEILING 100 FEET).

DURATION IN MINUTES											
VISIBILITY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
3/8	45	21	5	1	1	1	1				
5/16	17	7	1	2							
1/4	143	78	48	29	34	18	13	7	2	3	
3/16	31	15	9	9	9	2	2	1	1	1	
1/8	34	31	19	11	17	10	14	8	6		5
1/16	5	2	3	2	2	3				1	
0	1		1		1				1		

TABLE IV. (CEILING ZERO).

DURATION IN MINUTES											
VISIBILITY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
3/8	5	2	2								
5/16	6	2			2	3	2		1	1	
1/4	34	11	8	9	9						
3/16	12	4	2	2	2		2	1			
1/8	15	17	12	9	9	4	11	4	2	1	2
1/16	3	3	4	4	1		4	1	1	1	
0	1	2	2			1	2		1	1	

TABLE V. (CEILING 100 FEET OR ZERO).

DURATION IN MINUTES											
VISIBILITY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
3/8	46	24	6	1	2	1	1				
5/16	22	8	2	2	2						
1/4	157	79	53	31	37	21	16	9	2	4	1
3/16	39	20	11	7	7	2	4	1		1	1
1/8	34	33	22	19	20	14	21	12	13		8
1/16	8	9	4	9	3	3	3	1	2	2	
0	2	2	1		2	1	2		2	1	

TOTAL TIME AT OR BELOW EACH VISIBILITY CLASSIFIED AS ONE INCIDENT

TABLE VI. (IRRESPECTIVE OF CEILING).

DURATION IN MINUTES											
VISIBILITY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
3/8	99	64	33	17	64	44	44	32	33	19	19
5/16	40	20	9	5	67	39	45	27	34	19	18
1/4	74	54	57	38	70	34	45	28	32	21	16
3/16	34	29	32	20	24	20	31	19	20	9	10
1/8	28	24	24	18	18	14	28	19	15	8	9
1/16	9	9	4	6	6	4	6	2	2	4	1
0	1	1	4		1	1	3		2	1	1

TOTAL TIME AT OR BELOW EACH VISIBILITY CLASSIFIED AS ONE INCIDENT

TABLE VII. (CEILING 100 FEET).

DURATION IN MINUTES											
VISIBILITY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
3/8	120	78	31	31	41	30	33	19	14	9	9
5/16	107	71	49	26	44	23	39	15	16	9	9
1/4	99	69	50	26	49	20	39	15	15	9	9
3/16	38	31	23	12	15	10	19	7	9	4	5
1/8	31	26	12	11	11	16	16	7	4	3	5
1/16	6	1	2	1	4	3				2	
0	1		1		1				1		

TOTAL TIME AT OR BELOW EACH VISIBILITY CLASSIFIED AS ONE INCIDENT

TABLE VIII. (CEILING ZERO).

DURATION IN MINUTES											
VISIBILITY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
3/8	14	21	20	13	14	10	16	10	4	6	4
5/16	14	20	18	14	14	9	16	10	4	6	4
1/4	12	20	18	14	14	9	17	9	5	6	3
3/16	9	13	12	10	8	5	14	10	3	3	3
1/8	7	13	12	10	6	5	14	7	2	5	3
1/16		4	4	4	2		3	2			
0		2	2			1	2		1	1	

TOTAL TIME AT OR BELOW EACH VISIBILITY CLASSIFIED AS ONE INCIDENT

TABLE IX. (CEILING 100 FEET OR ZERO).

DURATION IN MINUTES											
VISIBILITY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
3/8	78	39	47	36	42	39	36	27	31	16	15
5/16	69	46	43	33	48	32	39	23	31	16	19
1/4	39	49	44	32	40	30	40	22	31	16	14
3/16	30	25	24	19	18	18	20	15	19	9	10
1/8	24	21	16	19	13	16	23	14	14	8	9
1/16	6	5	3	4	5	3	4		2	4	1
0	1	2	1		2	1	2		2	1	

TABLE X
ALL SEASONS

ATLANTA, ATLANTA

ALL HOURS

JANUARY 1956 - DECEMBER 1965

FREQUENCY OF OCCURRENCE

FREQUENCY OF OCCURRENCE														
	TIME IN MINUTES													
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	346	217	133	79	113	44	43	21	9	5	5	888	127	1015
IIIA	77	65	48	27	36	27	29	10	20	2	9	293	97	390
IIIB/C	11	4	6	6	7	4	7	2	3	4		34	20	54
II + III	177	121	88	62	94	54	63	48	40	27	26	942	295	797
III	93	51	42	32	36	27	30	16	23	7	11	214	119	327

TOTAL TIME IN EACH DURATION HOURS AND TENTHS

	TIME IN MINUTES												PERCENTAGE		
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL	
II	56.1	87.3	86.0	70.7	139.1	77.5	10.1	74.1	44.4	33.7	46.7	439.2	380.5	819.6	.50
IIIA	13.2	26.3	31.0	24.7	43.7	46.7	72.2	34.7	97.8	14.2	105.9	138.9	371.5	510.4	.16
IIIB/C	2.2	1.6	4.3	5.3	8.3	6.7	17.8	6.2	14.5	26.3		21.7	71.1	92.8	.02
II + III	90.9	48.7	97.4	55.1	116.5	95.1	159.1	157.9	194.5	188.1	323.7	308.5	1114.3	1422.8	.95
III	9.7	20.8	27.4	28.6	43.4	47.4	75.3	59.9	107.2	48.1	139.2	130.0	473.3	603.2	.15

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS

	TIME IN MINUTES																
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL			
II	9.7	24.1	38.8	33.7	73.9	105.7	145.3	211.8	296.0	404.0	560.0	29.7	179.7	48.5			
IIIA	10.2	24.3	38.8	34.9	72.9	105.9	146.4	207.9	295.5	426.0	705.7	32.9	229.8	87.5			
IIIB/C	12.2	24.3	42.8	52.5	71.3	100.0	150.1	185.9	289.0	394.8		38.3	213.4	103.1			
II + III	10.5	24.1	39.1	53.3	74.4	105.7	147.7	210.6	291.8	418.0	746.9	34.2	262.2	107.1			
III	11.0	24.9	39.1	53.7	72.3	105.4	150.9	209.5	292.4	412.3	759.4	34.4	251.3	110.7			

TOTAL OBSERVATION HOURS 87672

ATLANTA, ATLANTA
WIND DIRECTION VERSUS SPEED BY PERCENTAGE FREQUENCY
JANUARY 1966 - DECEMBER 1968

TABLE XI

PERCENTAGE FREQUENCY OF OCCURRENCE

CATEGORY	HOUR	WIND	CALM	1-5	6-10	11-15	16-20	21+	TOTAL
II	21-05	DIRECTION							
		N		.2	.2				.4
		NNE		.7	.7				1.4
		NE		3.2	2.4	.5			6.1
		ENE		3.1	10.2	1.7	.2		15.2
		E		6.6	11.4	3.2			21.1
		ESE		2.2	5.1	1.5			8.7
		SE		3.6	4.4	.7	.2		9.0
		SSE		1.9	1.9	.7			4.6
		S		1.5	1.7				3.2
		SSW		1.9	.5	.2			2.7
		SW		3.6	2.4	.5			6.6
		WSW		.2	2.7				2.9
		W		3.2	2.2	.5			5.9
		WNW		1.5	.5	.7			2.7
		NW		1.0	.2				1.2
		NNW		.5	.2				.7
		CALM	5.6						5.6
		TOTAL	5.6	36.9	46.8	10.2	.5		100.0
TOTAL RECORD OBSERVATIONS									412

PERCENTAGE FREQUENCY OF OCCURRENCE

CATEGORY	HOUR	WIND	CALM	1-5	6-10	11-15	16-20	21+	TOTAL
II	06-20	DIRECTION							
		N		.5	.5				1.0
		NNE							
		NE		2.2	2.4	.7	.5		5.7
		ENE		5.7	7.9	4.3	.2		18.2
		E		6.7	17.0	3.0	.5		27.2
		ESE		3.8	4.1	1.0			8.9
		SE		2.6	4.3	1.2			8.1
		SSE		1.9	2.2				4.1
		S		2.2	1.9	.5			4.5
		SSW		.5	1.9				2.4
		SW		.7	1.9	.2			2.9
		WSW		1.0	.7				1.7
		W		1.2	.7	.2			2.2
		WNW		.7	1.4	.2			2.4
		NW		1.0	.7	.5			2.2
		NNW							
		CALM	6.7						6.7
		TOTAL	6.7	30.6	47.6	13.9	1.2		100.0
TOTAL RECORD OBSERVATIONS									418

PERCENTAGE FREQUENCY OF OCCURRENCE

CATEGORY	HOUR	WIND	CALM	1-5	6-10	11-15	16-20	21+	TOTAL
IIIA	21-05	DIRECTION							
		N		.8					.8
		NNE		1.9	.4				2.3
		NE		1.9	1.5				3.4
		ENE		3.8	4.9	.2			8.9
		E		8.4	20.9	1.1			30.4
		ESE		3.8	2.3	.8			6.8
		SE		2.3	4.2				6.5
		SSE		2.3					2.3
		S		2.7	1.5				4.2
		SSW		1.5	.8				2.3
		SW		1.9	1.9				3.8
		WSW		1.9	1.9				3.8
		W		3.4	.4				3.8
		WNW		.8					.8
		NW		1.9	.4				2.3
		NNW		.8	1.5				2.3
		CALM	12.5						12.5
		TOTAL	12.5	38.8	42.6	6.1			100.0
TOTAL RECORD OBSERVATIONS									263

PERCENTAGE FREQUENCY OF OCCURRENCE

CATEGORY	HOUR	WIND	CALM	1-5	6-10	11-15	16-20	21+	TOTAL
IIIA	06-20	DIRECTION							
		N		.8	.4				1.2
		NNE			.4				.4
		NE		2.9	2.9				5.8
		ENE		1.7	8.3	3.7			13.6
		E		8.3	17.8	4.1	.4		30.6
		ESE		3.7	7.4	.4			11.6
		SE		2.9	1.2	.8			4.9
		SSE		1.2	1.2				2.5
		S		1.7	2.9	.4			5.0
		SSW		.8	1.2				2.1
		SW		1.7	1.7				3.3
		WSW		1.2		.4			1.7
		W		2.5	.8				3.3
		WNW		.8	2.1	.4			3.3
		NW		1.2	.8				2.1
		NNW		.4	.4				.8
		CALM	7.4						7.4
		TOTAL	7.4	31.4	49.6	11.2	.4		100.0
TOTAL RECORD OBSERVATIONS									242

PERCENTAGE FREQUENCY OF OCCURRENCE

CATEGORY	HOUR	WIND	CALM	1-5	6-10	11-15	16-20	21+	TOTAL
IIIB/C	21-05	DIRECTION							
		N		2.3					2.3
		NNE		4.7	4.7				9.3
		NE		7.0					7.0
		ENE		9.3	11.0	2.3			22.3
		E		2.3	2.3				4.6
		ESE		2.3					2.3
		SE		4.7					4.7
		SSE		2.3	2.3				4.6
		S							
		SSW		2.3					2.3
		SW		2.3					2.3
		WSW		7.0					7.0
		W		4.7					4.7
		WNW		2.3					2.3
		NW							
		NNW							
		CALM	25.6						25.6
		TOTAL	25.6	44.2	27.9	2.3			100.0
TOTAL RECORD OBSERVATIONS									43

PERCENTAGE FREQUENCY OF OCCURRENCE

CATEGORY	HOUR	WIND	CALM	1-5	6-10	11-15	16-20	21+	TOTAL
IIIB/C	06-20	DIRECTION							
		N		2.0					2.0
		NNE			2.0				2.0
		NE		4.1	4.1				8.2
		ENE		2.0	20.0				22.0
		E		4.1	8.2				12.3
		ESE		4.1	4.1				8.2
		SE		4.1					4.1
		SSE		4.1					4.1
		S		4.1					4.1
		SSW			4.1				4.1
		SW		2.0					2.0
		WSW			4.1				4.1
		W		2.0					2.0
		WNW			2.0				2.0
		NW							
		NNW							
		CALM	10.2						10.2
		TOTAL	10.2	32.7	37.1				100.0
TOTAL RECORD OBSERVATIONS									40

JANUARY 1956 - DECEMBER 1969

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS														
CATEGORY	TIME IN MINUTES													
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
I	9.7	23.7	41.0	53.4	75.3	101.6	141.5	198.8	285.7	400.5		29.8	168.0	43.0
II	10.8	23.0	39.0	53.9	70.7	102.4	140.1	207.3	291.0	401.0		32.7	149.5	53.8
IIIA	12.0	25.0	42.3	51.0	78.5	105.5				389.0		37.6	198.7	71.5
IIIB							145.0		343.0			97.0	195.0	132.2
I + II	11.0	24.0	41.1	50.9	75.0	101.0	141.3	204.6	270.7	409.3	781.3	31.0	215.5	81.6
III	11.7	23.0	39.4	52.7	70.3	102.1	142.9	204.7	294.0	411.0		30.8	158.2	68.3

TOTAL TIME IN EACH DURATION HOURS AND TENTHS														
CATEGORY	TIME IN MINUTES													
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	7.5	7.7	7.3	9.8	31.1	10.5	14.7	21.8	14.6	14.4	21.0	63.4	97.0	160.4
IIIA	1.0	3.7	2.7	9.9	6.3	7.2	16.6	10.7	27.2	7.0	54.4	14.6	116.2	118.1
IIIB	.8	.4			1.0							2.0		
IIIC									4.5	6.4			10.8	
II + III	6.5	4.8	3.7	6.4	16.8	8.9	17.7	37.3	22.0	48.9	135.0	98.1	249.8	307.9
III	.6	2.8	1.5		5.1	3.9	14.4	7.1	22.4	7.2	66.8	30.0	121.7	131.6

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS														
CATEGORY	TIME IN MINUTES													
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481-600	601-720	721-900	901-1080
II	10.0	20.2	36.3	53.6	71.8	104.8	146.8	218.0	292.7	433.0	628.5	33.7	232.8	69.7
IIIA	8.6	24.7	40.0	55.0	78.0	108.0	142.0	213.0	326.8	417.0	633.0	33.6	278.6	139.0
IIIB	12.0	22.0			61.0							23.8		23.8
IIIC									267.0	381.0			324.0	324.0
II + III	10.2	23.9	37.0	54.6	71.9	100.6	151.6	225.9	269.6	419.0	810.3	29.7	267.9	132.7
II + IIIA	7.0	24.1	47.0	76.3	116.0	153.7	212.3	335.8	430.0	801.6	33.2	265.0		207.6

2200 - 0600 (12877 OBSERVATION HOURS)														
FREQUENCY OF OCCURRENCE														
CATEGORY	TIME IN MINUTES													
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
IIA	18	120	5	3	3	11	12	12	5	4	6	270	60	20
IIB	47	37	25	14	2	11	13	1	12	1	6	145	96	201
IIIC	6	3	4	5	2	1	5	1	2	1	2	20	10	30
IIIC	1	1	1											
IIIC + III	86	84	72	45	61	34	43	27	29	17	13	328	163	501
III	25	26	20	17	15	14	13	15	13	3	6	104	65	168

TOTAL TIME IN EACH DURATION HOURS AND TENTHS													
CATEGORY	TIME IN MINUTES												
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481-720	721-960	961-1440
II	26.4	52.1	56.3	47.5	66.2	49.4	83.3	41.9	15.3	35.2	48.9	248.4	240.2
IIIA	8.4	15.2	15.8	14.5	25.9	19.3	38.5	30.4	34.5	6.8	65.4	79.1	216.4
IIIB	1.1	1.3	2.7	4.4	2.5	1.6	12.6	3.2	10.0	6.7	12.2	34.1	45.8
IIIC	5	5	5	5	5	5	5	5	5	5	5	5	5
II + III	14.7	33.9	42.0	40.3	78.0	64.1	103.8	93.3	145.5	118.7	140.6	204.8	876.6
III	5.1	10.8	12.7	15.1	19.6	24.8	33.4	53.1	60.7	19.7	65.9	63.3	257.3

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS														
CATEGORY	TIME IN MINUTES													
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481-	1-90	91-ALL	1-ALL
II	8.8	24.2	37.4	59.8	74.9	105.9	147.1	209.3	309.0	422.8	523.8	30.8	181.8	53.5
IIA	10.7	24.6	37.8	59.3	74.7	106.4	153.8	214.7	282.4	404.0	533.8	32.7	231.6	84.7
IIIB	10.8	25.0	40.8	59.3	75.0	97.0	150.0	190.0	300.0	402.0		36.7	204.3	71.3
II + III	8.5	27.0	39.0	59.0	74.0	106.0	146.5	207.4	301.0	419.1	690.2	36.3	247.4	103.0
III	12.2	25.0	38.0	53.4	73.4	106.1	154.2	217.3	280.1	393.0	639.0	36.5	241.4	114.5

ALL (47672 OBSERVATION HOURS)														
FREQUENCY OF OCCURRENCE		TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481-	1-90	91-ALL	1-ALL
II	321	209	132	84	119	45	2	9	9	6	841	139	1000	
IIIA	79	65	44	27	37	22	30	15	17	1	10	252	95	347
IIIB	13	6	8	7	5	1	5	1	3	2		39	14	53
IIIC	1													10
II + III	177	121	81	62	91	34	63	45	40	27	5	26	565	777
III	44	45	32	28	31	23	28	0	18	5	11	162	105	287

TOTAL TIME IN EACH DURATION HOURS AND TENTHS														
CATEGORY	TIME IN MINUTES													
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
I	52.5	82.3	85.4	75.1	147.5	78.5	116.9	76.9	44.4	83.0	35.9	442.7	435.0	878.3
IIA	19.8	26.2	28.2	24.4	45.5	38.6	73.6	53.5	83.6	5.8	109.9	137.8	358.8	492.1
II	2.5	2.5	9.5	6.1	6.1	9.1	12.5	9.1	19.1	19.1		28.0	48.0	72.7
IIIC	5	5	5	1.0	1.0	1.0	1.0	1.0	1.0	1.0		2.0	2.0	20.0
I + II	30.9	48.7	57.4	55.1	116.5	95.1	155.1	157.9	194.5	188.1	323.7	308.5	1114.3	1422.8
III	8.8	18.3	20.7	24.8	37.6	40.5	69.2	70.4	88.0	33.7	122.7	110.1	454.5	544.0

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS														
CATEGORY	TIME IN MINUTES													
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	9.8	24.1	38.8	59.7	74.3	106.7	146.1	209.8	295.8	420.1	558.7	30.9	108.0	32.7
III	10.5	24.2	39.5	54.1	73.7	105.4	147.1	213.8	295.0	404.0	650.6	35.4	220.6	83.1
IIIB	11.9	24.3	41.5	52.6	73.6	102.7	150.2	190.9	301.7	393.5	514.8	32.8	209.0	82.3
IIIC	12.7	27.9	42.7	52.7	73.6	102.7	150.2	210.6	301.7	393.5	514.8	32.8	209.0	82.3
II + III	10.5	24.1	39.1	59.3	74.4	105.7	147.7	210.6	291.8	418.0	746.9	34.2	242.2	107.1
III	11.4	24.3	39.8	59.1	72.7	105.7	148.3	211.2	293.3	400.0	723.0	34.3	240.3	113.8

ATLANTA, ATLANTA												
TABLE XIII - TEMPERATURE < 33 DEGREES (F),												
0700 - 1300 (25971 OBSERVATION HOURS) JANUARY 1956 - DECEMBER 1965												
FREQUENCY OF OCCURRENCE												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	4	2			2	1						9
IIIA	3	1	1		1		1					7
IIIB												
IIIC												
II + III		2	2		3	1		1				8
III		2			1		1					4
TOTAL TIME IN EACH DURATION HOURS AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	.8	.9			2.6	1.6						4.2
IIIA	.7	.4	.7		1.0		2.9					2.8
IIIB												2.9
IIIC												
II + III		.9		.6	3.7	1.6		9.1				9.4
III	.4				1.0		2.9					1.3
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	11.3	26.0			77.0	97.0						31.4
IIIA	13.3	26.0	39.0		62.0		171.0					28.0
IIIB												171.0
IIIC												
II + III		26.0		49.0	74.0	97.0		186.0				93.8
III	12.3				62.0		171.0					29.0
1400 - 2100 (29224 OBSERVATION HOURS)												
FREQUENCY OF OCCURRENCE												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	1						1					1
IIIA							1					1
IIIB												
IIIC												
II + III							1					1
III												
TOTAL TIME IN EACH DURATION HOURS AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II							2.7					2.7
IIIA							2.7					2.7
IIIB												
IIIC												
II + III							2.7					2.7
III												
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II							160.0					160.0
IIIA							160.0					160.0
IIIB												
IIIC												
II + III							160.0					160.0
III												
2200 - 0600 (32677 OBSERVATION HOURS)												
FREQUENCY OF OCCURRENCE												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	3						1					4
IIIA			1				1					1
IIIB												1
IIIC												
II + III	1		1	1			1					3
III			1									1
TOTAL TIME IN EACH DURATION HOURS AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	.3						2.4					1.0
IIIA			.6				2.4					.8
IIIB												2.4
IIIC												
II + III	.2		.5	.9			2.4					1.6
III			.6									.8
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	9.7		31.0				142.0					19.0
IIIA			33.0				142.0					33.0
IIIB												142.0
IIIC												
II + III	10.0		31.0	32.0			142.0					31.0
III			33.0									33.0
ALL (87672 OBSERVATION HOURS)												
FREQUENCY OF OCCURRENCE												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	7	2	1		2	1	2					12
IIIA	3	1	2		1		2					7
IIIB												2
IIIC												
II + III	1	2	1	2	3	1	2					9
III			1		1		1					4
TOTAL TIME IN EACH DURATION HOURS AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	1.2	.9	.3		2.6	1.6	9.0					3.2
IIIA	.7	.4	1.2		1.0		9.4					3.4
IIIB												9.4
IIIC												
II + III	.2	.9	.5	1.7	3.7	1.6	9.0					6.9
III	.4		.6		1.0		2.9					2.0
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	10.6	26.0	31.0		77.0	97.0	131.0					29.9
IIIA	13.3	26.0	36.0		62.0		161.0					26.7
IIIB												161.0
IIIC												
II + III	10.0	26.0	31.0	50.5	74.0	97.0	131.0					46.2
III	12.3		33.0		62.0		171.0					30.0

ATLANTA, ATLANTA
TABLE XIV - TEMPERATURE < 33 DEGREES (F), WITH FOG, NO PRECIPITATION, AND WIND < 9 KNOTS.
0700 - 1300 (23971 OBSERVATION HOURS) JANUARY 1956 - DECEMBER 1965

FREQUENCY OF OCCURRENCE		TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	4					1						4	1	1-ALL
IIIA	3			1	1							3		5
IIIB														5
IIIC														
II + III	1				2	1						4	1	5
III	2				1							4		4

TOTAL TIME IN EACH DURATION HOURS AND TENTHS		TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	.8					1.6						.8	1.6	2.4
IIIA	.7			1.0	1.2							2.8		2.8
IIIB														
IIIC														
II + III	.1			.8	2.4	1.6						3.3	1.6	5.0
III	.4			1.0	1.2							2.8		2.6

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS		TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	11.3					97.0						11.3	97.0	28.4
IIIA	13.3			60.0	70.0							34.0		34.0
IIIB														
IIIC														
II + III	6.0			49.0	72.5	97.0						50.0	97.0	99.4
III	12.5			60.0	70.0							38.8		38.8

FREQUENCY OF OCCURRENCE		TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	2											2		2
IIIA	1											1		1
IIIB														
IIIC														
II + III	2											2		2
III														

TOTAL TIME IN EACH DURATION HOURS AND TENTHS		TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	.9											.9		.9
IIIA	.4											.4		.4
IIIB														
IIIC														
II + III	.9											.9		.9
III														

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS		TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	25.3											25.3		25.3
IIIA	26.0											26.0		26.0
IIIB														
IIIC														
II + III	25.5											25.5		25.5
III														

FREQUENCY OF OCCURRENCE		TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	2											2		2
IIIA	1											1		1
IIIB														
IIIC														
II + III	1											2		2
III												1		1

TOTAL TIME IN EACH DURATION HOURS AND TENTHS		TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	.3											.6		.8
IIIA	.3											.6		.6
IIIB														
IIIC														
II + III	.3			.9								1.4		1.4
III	.6											.6		.6

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS		TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	9.3											16.7		16.7
IIIA	31.0											33.0		33.0
IIIB														
IIIC														
II + III	31.0			32.0								41.5		41.5
III	33.0											33.0		33.0

FREQUENCY OF OCCURRENCE		TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	6	2	1			1						9	1	10
IIIA	3	1	1	1	1							7		7
IIIB														
IIIC														
II + III	1	2	1	2	2	1						8	1	9
III	2			1	1	1						5		5

TOTAL TIME IN EACH DURATION HOURS AND TENTHS		TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	1.1	.9	.5			1.6						2.4	1.6	4.1
IIIA	.7	.4	.6	1.0	1.2							3.9		3.9
IIIB														
IIIC														
II + III	.1	.9	.5	1.7	2.4	1.6						3.6	1.6	7.2
III	.4			.6	1.0	1.2						3.1		3.1

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS		TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	10.7	25.5	11.0			97.0						16.2	97.0	24.3
IIIA	13.3	26.0	33.0	60.0	70.0							33.1		33.1
IIIB														
IIIC														
II + III	6.0	29.3	31.0	30.3	72.5	97.0						41.8	97.0	47.9
III	12.5			33.0	60.0	70.0						37.6		37.6

ATLANTA, ATLANTA
TABLE XV - TEMPERATURE < 33 DEGREES (F), WITH FOG, NO PRECIPITATION, AND WIND 9-12 KNOTS.
0700 - 1900 (25971 OBSERVATION HOURS) JANUARY 1936 - DECEMBER 1963

FREQUENCY OF OCCURRENCE		TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II					1							3		3
IIIA	1	1												
IIIB														
IIIC														
II + III	1	1			1							3		3
III	1	1			1							3		3

TOTAL TIME IN EACH DURATION HOURS AND TENTHS

TOTAL TIME IN EACH DURATION GROUP AND TENSIS													
CATEGORY	TIME IN MINUTES										1-90	91-ALL	1-ALL
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480			
II						1.0							
IIIA	.2	.5										1.7	1.7
IIIB													
IIIC													
II + III	.2	.5				1.0						1.7	1.7
III	.2	.5				1.0						1.7	1.7

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS

AVERAGE TIME IN EACH DURATION MINUTES AND PERCENTS											TIME IN MINUTES			
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II														
IIIA	11.0	30.0			62.0							34.3		34.3
IIIB														
IIIC														
II + IIIA	11.0	30.0			62.0							34.3		34.3
IIIB	11.0	30.0			62.0							34.3		34.3

1400 - 2100 (29224 OBSERVATION HOURS)

FREQUENCY OF OCCURRENCE		TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II					1							1		1
IIIA						1						1		1
IIIB														
IIIC														
II + III					1							1		1
III														

TOTAL TIME IN EACH DURATION HOURS AND TENTHS

TOTAL TIME IN EACH DURATION HOURS AND TERMS														
CATEGORY	TIME IN MINUTES													
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II						1.8							1.8	1.8
IIIA						1.8							1.8	1.8
IIIB														
IIIC														
II + III						1.8							1.8	1.8
III														

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS

AVERAGE TIME IN EACH DURATION MINUTES AND TERMS														
CATEGORY	1-15	16-30	31-45	46-60	61-90	TIME IN MINUTES								
						91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II						109.0							109.0	109.0
IIIA						109.0							109.0	109.0
IIIB														
IIIC														
II + III						109.0							109.0	109.0
III														

2200 - 0600 (32677 OBSERVATION HOURS)

NO OCCURRENCE OF DATA

FREQUENCY OF OCCURRENCE		ALL (87672 OBSERVATION HOURS)												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II					1							3	1	4
IIIA	1	1			1	1								
IIIB														
IIIC														
II + III	1	1			1	1						3	1	4
III	1	1			1							3		3

TOTAL TIME IN EACH DURATION HOURS AND TENTHS

TOTAL TIME IN EACH DURATION HOUR AND TERMS													
CATEGORY	TIME IN MINUTES										1-90	91-ALL	1-ALL
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480			
II						1.0	1.8						
IIIA	.2	.3			1.0	1.8					1.7	1.8	2.8
IIIB													
IIIC													
II + III	.2	.3			1.0	1.8					1.7	1.8	2.8
III	.2	.3			1.0						1.7		1.7

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS													
CATEGORY	TIME IN MINUTES										1-90	91-ALL	1-ALL
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480			
II						109.0						109.0	109.0
IIIA	11.0	30.0			62.0	109.0					34.3	109.0	39.0
IIIB													
IIIC													
II + III	11.0	30.0			62.0	109.0					34.3	109.0	39.0
III	11.0	30.0			62.0						34.3		34.3

ATLANTA, ATLANTA												
TABLE XVI - TEMPERATURE < 29 DEGREES (F).												
0700 - 1300 (25971 OBSERVATION HOURS)												
JANUARY 1956 - DECEMBER 1965												
FREQUENCY OF OCCURRENCE												
TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	2				1		1					3
IIIA			1		1		1					3
IIIB												3
IIIC												
II + III					2		1					3
III					1							2
TOTAL TIME IN EACH DURATION HOURS AND TENTHS												
TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	.4				1.2							1.5
IIIA			.7		1.0		2.9					1.5
IIIB												4.5
IIIC												
II + III					2.3		3.1					3.4
III					1.0		2.9					3.9
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS												
TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	10.5				89.0							30.0
IIIA			39.0		82.0		171.0					30.0
IIIB												90.7
IIIC												
II + III					88.5		186.0					107.7
III					82.0		171.0					116.5

1400 - 2100 (29224 OBSERVATION HOURS)

NO OCCURRENCE OF DATA

2200 - 0600 (32877 OBSERVATION HOURS)												
FREQUENCY OF OCCURRENCE												
TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	1											1
IIIA												
IIIB												
IIIC												
II + III	1											1
III												
TOTAL TIME IN EACH DURATION HOURS AND TENTHS												
TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	.2											.2
IIIA												
IIIB												
IIIC												
II + III	.2											.2
III												
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS												
TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	10.0											10.0
IIIA												
IIIB												
IIIC												
II + III	10.0											10.0
III												

ALL (87672 OBSERVATION HOURS)												
FREQUENCY OF OCCURRENCE												
TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	3				1		1					4
IIIA			1		1		1					3
IIIB												
IIIC												
II + III	1				2		1					4
III					1							2
TOTAL TIME IN EACH DURATION HOURS AND TENTHS												
TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	.3				1.2							1.7
IIIA			.7		1.0		2.9					1.7
IIIB												4.3
IIIC												
II + III	.2				2.3		3.1					3.6
III					1.0		2.9					3.9
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS												
TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	10.3				89.0							23.0
IIIA			39.0		82.0		171.0					23.0
IIIB												90.7
IIIC												
II + III	10.0				88.5		186.0					107.7
III					82.0		171.0					116.5

ATLANTA, ATLANTA
TABLE XVII - TEMPERATURE < 29 DEGREE (F), WITH "DE, NO PRECIPITATION, AND WIND < 9 KNOTS.
0700 - 1900 (29971 OBSERVATION HOURS) JANUARY 1956 - DECEMBER 1963

FREQUENCY OF OCCURRENCE												
TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL
II	2											2
IIIA				1	1							2
IIIB												
IIIC												
II + III	1				2							3
III				1	1							2
TOTAL TIME IN EACH DURATION HOURS AND TENTHS												
TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL
II	.4											.4
IIIA				1.0	1.2							2.2
IIIB												
IIIC												
II + III	.1				2.4							2.5
III				1.0	1.2							2.2
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS												
TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL
II	10.5											10.5
IIIA				60.0	70.0							65.0
IIIB												
IIIC												
II + III	6.0				72.5							50.3
III				60.0	70.0							65.0

1400 - 2100 (29824 OBSERVATION HOURS)

NO OCCURRENCE OF DATA

2200 - 0600 (32877 OBSERVATION HOURS)

NO OCCURRENCE OF DATA

FREQUENCY OF OCCURRENCE												
TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL
II	2											2
IIIA				1	1							2
IIIB												
IIIC												
II + III	1				2							3
III				1	1							2
TOTAL TIME IN EACH DURATION HOURS AND TENTHS												
TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL
II	.4											.4
IIIA				1.0	1.2							2.2
IIIB												
IIIC												
II + III	.1				2.4							2.5
III				1.0	1.2							2.2
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS												
TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL
II	10.5											10.5
IIIA				60.0	70.0							65.0
IIIB												
IIIC												
II + III	6.0				72.5							50.3
III				60.0	70.0							65.0

ATLANTA, ATLANTA
TABLE XVIII- TEMPERATURE < 29 DEGREES (F), WITH PDB, NO PRECIPITATION, AND WIND 9-12 KNOTS.
0700 - 1300 (23971 OBSERVATION HOURS) JANUARY 1956 - DECEMBER 1965

FREQUENCY OF OCCURRENCE		TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II														
IIIA	1	1			1							3		3
IIIB														
IIIC														
II + III	1	1			1							3		3
III	1	1			1							3		3
TOTAL TIME IN EACH DURATION HOURS AND TENTHS														
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II														
IIIA	.2	.5			1.0							1.7		1.7
IIIB														
IIIC														
II + III	.2	.5			1.0							1.7		1.7
III	.2	.5			1.0							1.7		1.7
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS														
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II														
IIIA	11.0	30.0			62.0							34.3		34.3
IIIB														
IIIC														
II + III	11.0	30.0			62.0							34.3		34.3
III	11.0	30.0			62.0							34.3		34.3

1400 - 2100 (29224 OBSERVATION HOURS)

NO OCCURRENCE OF DATA

2200 - 0600 (32677 OBSERVATION HOURS)

NO OCCURRENCE OF DATA

FREQUENCY OF OCCURRENCE		TIME IN MINUTES												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II														
IIIA	1	1			1							3		3
IIIB														
IIIC														
II + III	1	1			1							3		3
III	1	1			1							3		3
TOTAL TIME IN EACH DURATION HOURS AND TENTHS														
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II														
IIIA	.2	.5			1.0							1.7		1.7
IIIB														
IIIC														
II + III	.2	.5			1.0							1.7		1.7
III	.2	.5			1.0							1.7		1.7
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS														
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II														
IIIA	11.0	30.0			62.0							34.3		34.3
IIIB														
IIIC														
II + III	11.0	30.0			62.0							34.3		34.3
III	11.0	30.0			62.0							34.3		34.3

ATLANTA, ATLANTA
TABLE XIX - TEMPERATURE > 32 DEGREES (F).
0700 - 1300 (25971 OBSERVATION HOURS) JANUARY 1956 - DECEMBER 1963

FREQUENCY OF OCCURRENCE												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	111	56	33	20	37	10	8	4	3	2	237	27
IIIA	23	19	16	10	10	8	8	3	2	1	78	22
IIIB	4	2	4	2	2	2	1	1	1	1	14	17
IIIC	1	1	1	1	1	1	1	1	1	1	1	4
II + III	53	24	20	9	16	14	13	8	3	3	122	49
III	14	12	10	11	10	7	8	3	1	1	57	77

TOTAL TIME IN EACH DURATION HOURS AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	17.9	22.1	22.6	17.8	46.4	17.0	18.9	13.3	14.3	13.4	120.8	76.8
IIIA	4.1	7.3	10.4	9.0	11.9	13.7	18.2	10.4	9.7	6.7	42.7	56.5
IIIB	.8	.8	2.8	1.7	2.6	3.3	1.8	2.4	5.7	6.4	8.8	20.3
IIIC	.9	9.6	13.7	7.7	20.1	24.3	32.4	28.0	22.8	20.5	39.1	60.7
II + III	2.7	6.6	6.6	9.7	11.9	11.9	18.6	10.2	4.9	6.9	35.4	52.5

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	9.6	22.7	41.1	33.4	75.3	102.1	141.5	198.8	289.7	400.5	29.6	170.6
IIIA	10.7	23.0	39.0	33.9	71.6	102.4	136.3	207.3	291.0	401.0	32.8	148.5
IIIB	12.0	23.0	42.3	31.0	78.3	105.3	145.0	149.0	343.0	383.0	37.6	198.7
IIIC	11.0	24.0	41.1	31.1	75.2	105.1	149.3	209.9	273.8	409.3	29.9	218.1
II + III	11.6	23.0	39.4	32.7	71.1	102.1	139.4	204.7	296.0	411.0	37.2	137.6

FREQUENCY OF OCCURRENCE												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	45	19	12	11	26	6	5	6	3	2	2	113
IIIA	7	9	4	1	5	4	7	3	3	1	5	24
IIIB	3	1	1	1	1	1	1	1	1	1	1	5
IIIC	3	1	1	1	1	1	1	1	1	1	1	2
II + III	38	12	6	7	14	5	6	10	3	7	10	77
III	5	7	2	2	4	2	6	2	4	1	5	18

TOTAL TIME IN EACH DURATION HOURS AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	7.5	7.7	7.3	9.8	31.1	10.5	12.0	21.8	14.6	14.4	21.0	63.4
IIIA	1.0	3.7	2.7	.9	6.3	7.2	16.3	10.7	27.2	7.0	36.4	14.6
IIIB	.6	.4	1.0	1.0	1.0	1.0	1.0	1.0	4.3	6.4	2.0	10.8
IIIC	6.3	4.8	3.7	6.4	16.8	8.9	19.0	37.3	22.0	48.9	139.0	36.1
II + III	.6	2.8	1.5	5.1	3.9	14.4	7.1	22.4	7.2	66.8	10.0	121.7

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	10.0	24.2	36.3	33.6	71.8	104.8	144.2	218.0	292.7	433.0	428.3	33.7
IIIA	8.6	24.7	40.0	39.0	78.0	108.0	141.6	213.0	326.8	417.0	433.0	33.6
IIIB	12.0	22.0	41.0	31.0	78.0	108.0	141.6	213.0	326.8	417.0	433.0	33.6
IIIC	10.2	23.9	37.0	34.6	71.9	106.6	130.2	223.9	283.6	419.0	410.2	29.7
II + III	7.0	24.1	44.0	37.0	76.3	116.0	143.7	212.5	335.8	430.0	401.6	33.2

FREQUENCY OF OCCURRENCE												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	158	129	87	53	53	28	33	12	3	5	4	480
IIIA	47	37	24	16	20	11	19	11	12	1	6	144
IIIB	6	3	4	5	2	1	5	1	2	1	1	20
IIIC	1	1	1	1	1	1	1	1	1	1	1	4
II + III	85	84	61	44	61	34	42	27	20	17	13	335
III	25	26	19	17	16	14	13	19	19	3	6	103

TOTAL TIME IN EACH DURATION HOURS AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	29.9	32.1	33.7	47.5	86.2	49.4	81.0	61.9	19.3	33.2	34.9	247.4
IIIA	8.4	13.2	15.2	14.5	24.9	19.3	36.3	39.4	36.5	6.8	65.4	78.6
IIIB	1.1	1.3	2.7	4.4	2.5	1.6	15.6	3.2	10.0	6.7	12.2	34.1
IIIC	2.2	3.3	3.3	1.2	1.2	1.2	2.6	2.6	5.1	6.4	2.1	2.0
II + III	14.3	33.9	39.2	39.4	76.0	60.1	102.7	93.3	145.3	118.7	149.6	203.2
III	5.1	10.8	12.1	15.1	19.6	24.8	33.4	33.1	60.7	10.7	65.9	62.7

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	9.8	24.2	38.4	57.8	74.9	105.9	147.2	209.3	309.0	422.8	523.8	30.9
IIIA	10.7	24.6	38.0	34.3	74.7	104.4	133.8	214.7	282.4	404.0	433.0	32.7
IIIB	10.8	23.0	40.8	33.2	75.0	97.0	130.8	190.0	300.0	402.0	433.0	32.7
IIIC	8.3	27.0	39.3	69.0	69.0	139.0	146.6	207.4	301.0	419.1	490.2	32.3
II + III	10.2	24.2	38.8	33.7	74.7	106.0	146.6	207.4	301.0	419.1	490.2	32.3
III	12.2	23.0	38.3	33.4	73.4	104.1	134.2	212.3	280.1	393.0	433.0	32.3

FREQUENCY OF OCCURRENCE												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	315	204	132	84	115	22	44	22	9	6	10	850
IIIA	77	65	43	27	34	22	29	15	17	1	10	246
IIIB	13	4	8	7	3	3	5	1	3	2	1	39
IIIC	1	1	2	1	1	1	2	1	1	1	1	5
II + III	176	120	87	60	91	33	61	45	39	27	26	334
III	44	43	31	28	30	23	27	20	18	5	11	178

TOTAL TIME IN EACH DURATION HOURS AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	91.3	81.9	85.6	75.1	143.7	76.9	111.9	76.9	44.4	63.0	38.9	437.3
IIIA	13.4	26.2	27.7	24.4	44.4	38.6	70.7	32.9	33.6	6.8	109.9	135.8
IIIB	2.5	2.3	5.3	6.1	6.1	5.1	12.5	5.2	15.1	17.1	23.0	48.8
IIIC	2.2	3.3	1.3	1.2	1.6	1.6	5.0	5.1	5.1	6.4	2.8	18.8
II + III	30.7	48.3	96.9	33.4	112.8	93.5	190.7	186.6	190.5	188.1	323.7	308.0
III	8.4	18.3	20.2	24.8	36.3	40.3	66.4	70.4	86.0	33.7	132.7	108.1

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90
II	11.1	24.1	38.9	33.7	74.3	104.9	145.9	209.8	295.8	420.1	536.7	30.9
IIIA	10.5	26.2	38.6	34.1	74.0	105.6	146.3	215.8	295.0	406.0	436.0	32.9
IIIB	11.3	24.3	41.3	32.6	73.6	102.7	130.2	190.0	301.7	393.5	436.0	32.9
IIIC	8.3	27.0	39.3	69.0	69.0	139.0	146.6	207.4	301.0	419.1	490.2	32.3
II + III	10.3	24.1	39.2	33.4	74.4	105.8	147.6	211.2	292.7	418.0	744.9	33.9
III	11.4	24.3	39.0	33.1	73.1	105.7	147.4	211.2	293.3	404.0	723.8	33.4

ATLANTA, ATLANTA
TABLE XX - TEMPERATURE > 32 DEGREES (F), WITH FOG, NO PRECIPITATION, AND WIND < 9 KNOTS.
0700 - 1300 (29971 OBSERVATION HOURS) JANUARY 1956 - DECEMBER 1965
FREQUENCY OF OCCURRENCE

	TIME IN MINUTES													
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	43	18	23	13	17	2	4	2				132	8	140
IIIA	19	13	9	5	8	6	3	1				34	10	44
IIIB	4	1	4	2	1							12		12
IIIC			2		1		1					3	1	4
II + III	27	18	26	13	13	8	9	1	1			97	19	116
III	12	9	9	9	8	6	2					47	8	55

TOTAL TIME IN EACH DURATION HOURS AND TENTHS

	TIME IN MINUTES													
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	9.9	19.1	15.2	11.5	21.7	3.5	9.7	6.5				73.3	19.6	92.9
IIIA	3.3	4.8	6.0	4.5	9.7	11.0	6.6	3.4				27.0	20.3	47.3
IIIB	.9	.5	2.9	1.9	1.5							7.9		8.2
IIIC			1.3		1.4		2.4					2.6	2.4	4.7
II + III	4.3	7.6	17.3	11.3	18.2	13.8	22.3	9.7	4.3			36.8	44.1	100.9
III	2.4	3.2	6.4	8.1	9.9	10.9	4.4					30.0	15.3	45.3

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS

	TIME IN MINUTES													
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	9.4	23.2	39.6	52.8	76.5	104.0	149.5	199.5				28.9	147.1	34.9
IIIA	10.5	22.3	39.9	53.8	72.6	109.8	131.3	201.0				30.7	121.7	41.0
IIIB	13.8	30.0	43.8	57.5	87.0							39.4		41.0
IIIC			40.3				82.0					50.8	145.0	59.4
II + III	9.6	25.4	40.0	52.3	74.8	103.6	148.6	221.0	257.0			35.1	139.2	52.2
III	12.0	21.6	42.9	53.8	74.1	109.2	131.3					38.3	114.8	49.4

1400 - 2100 (29224 OBSERVATION HOURS)

	TIME IN MINUTES													
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	15	6	6	3	5	1	2					35	3	38
IIIA	3	4	2	1	2	5	4		1	1		12	11	23
IIIB	3											4		4
IIIC			1									1		1
II + III	12	4	3	3	4	5	6	2	1	1		28	15	43
III	3	3	1		2	4	3		1	1		9	9	18

TOTAL TIME IN EACH DURATION HOURS AND TENTHS

	TIME IN MINUTES													
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	2.6	2.3	3.7	3.0	6.2	1.9	4.8					17.8	6.7	24.4
IIIA	.7	1.7	1.2	1.0	2.5	8.7	9.7		4.9	6.3		6.1	29.5	33.2
IIIB	.8		.7									1.4		1.4
IIIC			.7									.7		.7
II + III	2.3	1.7	3.0	2.9	4.9	9.1	15.1	7.4	4.9	6.3		14.9	42.7	57.7
III	.8	1.3	.7		2.5	7.1	7.7		4.9	6.3		5.2	25.9	31.1

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS

	TIME IN MINUTES													
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	10.3	23.3	37.3	59.3	73.8	112.0	144.0					30.5	133.3	38.6
IIIA	13.3	25.3	37.0	59.0	75.0	104.0	144.8		295.0	375.0		30.6	140.9	86.6
IIIB	15.0		40.0									21.3		21.3
IIIC			39.0									39.0		39.0
II + III	11.7	25.8	38.4	58.3	74.0	108.6	151.0	222.0	295.0	375.0		32.0	170.9	93.5
III	15.0	25.7	40.0		74.5	105.8	159.0		295.0	375.0		34.6	172.4	103.5

2200 - 0600 (32677 OBSERVATION HOURS)

	TIME IN MINUTES													
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	121	95	49	31	31	16	10	5	2	1		327	34	361
IIIA	45	34	18	14	17	11	10	6	3	1		128	33	161
IIIB	5	3	3	3	1	1	3	1	1	1		17	7	24
IIIC	1	1	1		1		1					4	1	5
II + III	62	71	38	31	44	25	23	20	15	8		246	93	339
III	26	27	15	17	16	13	10	8	5	2		101	39	140

TOTAL TIME IN EACH DURATION HOURS AND TENTHS

	TIME IN MINUTES													
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	20.4	37.8	31.0	28.0	37.6	27.7	24.6	17.9	9.9	6.3		154.7	85.9	240.6
IIIA	8.5	14.3	11.4	12.7	21.6	19.6	24.9	21.0	24.0	6.3		68.4	89.9	150.9
IIIB	.9	1.3	2.0	4.4	1.1	1.6	7.9	3.2	5.3	6.7		9.9	24.9	35.4
IIIC	.2	.5	.7		1.2		2.8					2.1	2.8	4.3
II + III	11.5	28.2	24.6	27.7	53.5	49.2	56.5	68.0	79.5	54.3		17.7	143.5	240.7
III	9.5	11.4	9.5	19.2	20.2	23.2	24.8	27.9	24.6	13.4		9.2	61.8	184.8

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS

	TIME IN MINUTES													
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	10.1	23.9	38.0	34.1	72.7	103.8	147.6	210.4	296.3	375.0		28.4	151.6	40.0
IIIA	11.3	23.3	37.9	34.3	78.1	106.8	149.2	210.2	288.2	375.0		32.1	163.4	36.2
IIIB	11.0	25.0	39.3	33.2	65.0	97.0	158.3	190.0	330.0	402.0		34.9	213.4	86.6
IIIC	8.5	27.0	39.5		69.0		166.0					32.0	166.0	51.1
II + III	11.1	23.8	38.8	53.6	73.0	103.6	147.4	204.1	302.1	407.1		35.3	203.4	81.3
III	12.7	25.3	38.1	53.6	75.8	107.2	148.9	209.0	294.8	402.0		36.7	189.3	79.2

ALL (87672 OBSERVATION HOURS)

	TIME IN MINUTES													
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	199	137	78	47	53	19	16	7	2	1		314	43	359
IIIA	67	51	28	19	26	20	15	6	6	2		191	49	240
IIIB	12	4	9	7	3	1	4	1	1	1		35	8	43
IIIC	1	1	3		1		1					6	1	7
II + III	101	99	49	47	61	38	38	23	17	9		271	127	498
III	41	39	25	26	24	23	15	8	6	3		107	56	213

TOTAL TIME IN EACH DURATION HOURS AND TENTHS

	TIME IN MINUTES													
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	32.9	58.3	49.9	42.4	65.4	35.0	39.1	24.0	9.9	6.3		243.8	112.2	356.0
IIIA	12.4	20.8	17.9	17.2	32.5	35.6	36.4	21.0	28.9	12.5		100.6	128.2	228.9
IIIB	2.6	1.8	6.2	6.4	3.8	1.6	10.5	3.2	5.3	6.7		20.5	27.8	47.9
IIIC	.2	.3	2.0		1.3		2.6					3.9	2.6	6.7
II + III	18.2	37.5	44.9	42.0	74.7	66.1	95.9	79.1	84.7	60.5		17.7	217.2	619.2
III	8.7	15.9	16.6	23.3	32.6	41.2	36.9	27.9	29.5	19.7		9.2	97.0	261.2

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS

	TIME IN MINUTES													
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	9.9	24.2	38.4	34.1	74.0	104.2	146.6	209.6	296.3	375.0		28.7	149.6	38.4
IIIA	11.1	20.5	38.4	34.2	74.9	106.9	149.3	210.0	289.3	375.0		31.6	157.0	35.7
IIIB	12.9	28.3	41.4	34.4	76.0	97.0	157.8	190.0	330.0	402.0		35.2	206.3	66.8
IIIC	8.5	27.0	39.8		75.3		155.5					34.5	189.3	57.3
II + III	10.8	24.2	39.1	53.6	73.4	104.3	148.3	206.4	299.1	403.6	530.0	33.1	189.6	74.0
III	12.7	24.4	39.9	53.7	75.2	107.5	147.4	204.0	294.3	395.0	549.0	37.1	178.9	73.6

ATLANTA, ATLANTA
TABLE XXI - TEMPERATURE > 32 DEGREES (F), WITH FOG, NO PRECIPITATION, AND WIND 9-12 KNOTS.
0700 - 1300 (25571 OBSERVATION HOURS) JANUARY 1956 - DECEMBER 1965

FREQUENCY OF OCCURRENCE												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	28	11	5	2	1						47	1 48
IIIA	5	2	4	4	2		1	1			17	2 19
IIIB	1	2	1		1						5	3
IIIC												
II + III	26	10	7	5	4	1	1	1			52	3 55
III	4	2	3	4	2		1				15	1 16

TOTAL TIME IN EACH DURATION HOURS AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	4.7	4.0	3.1	2.0	1.3						15.0	4.0 19.0
IIIA	.9	.7	2.6	3.8	2.4		2.3	4.0			8.8	6.3 12.0
IIIB	.3	.2			1.1						2.9	2.9
IIIC												
II + III	4.8	4.6	3.4	4.8	3.2	1.8	2.4	4.0			22.9	8.2 31.1
III	.7	.4	1.1	3.7	2.3		2.3				9.0	2.3 11.9

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	10.0	21.7	37.8	80.0	75.0			240.0			19.2	240.0 25.8
IIIA	10.4	26.0	39.0	57.3	72.5		139.0	240.0			30.9	199.5 37.0
IIIB	15.0	27.5	40.0		66.0						35.2	35.2
IIIC												
II + III	11.0	21.6	39.0	57.8	78.0	105.0	149.0	240.0			26.5	165.3 35.9
III	10.5	27.5	41.3	54.8	68.0		139.0				38.4	139.0 44.7

FREQUENCY OF OCCURRENCE												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	13	5	3	2	3						26	26
IIIA	4	4	2	1	2						13	13
IIIB	2										2	2
IIIC												
II + III	13	9	5	3	5	1	1				25	2 27
III	3	2	1	1	1						8	8

TOTAL TIME IN EACH DURATION HOURS AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	2.2	2.1	2.0	1.9	3.6						11.7	11.7
IIIA	.8	1.7	1.5	1.0	2.8						6.2	6.2
IIIB	.5										.3	.3
IIIC												
II + III	2.5	1.2	2.0	3.6	2.2	1.7	2.3				11.5	4.0 15.5
III	.7	.8	.8	.9	1.5						4.7	4.7

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	10.0	25.2	39.3	56.5	71.0						26.9	26.9
IIIA	12.0	25.5	43.5	57.0	85.0						28.8	28.8
IIIB	15.0										15.0	15.0
IIIC												
II + III	11.3	24.0	40.3	54.5	86.5	100.0	140.0				27.6	120.0 34.3
III	14.7	24.0	45.0	52.0	90.0						24.9	34.9

FREQUENCY OF OCCURRENCE												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	3	17	11	8	5	1					72	73
IIIA	5	4	2	3	5	1	1				19	21
IIIB	1										1	1
IIIC												
II + III	31	18	9	11	7	2	4				75	6 82
III	5	3	2	2	3	2	1				15	3 18

TOTAL TIME IN EACH DURATION HOURS AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	5.2	6.9	7.0	7.4	6.5	1.6					33.0	1.9 34.9
IIIA	1.1	1.7	1.4	2.9	6.6	1.9	3.0				12.6	4.9 17.5
IIIB	.3										.3	.3
IIIC											.6	.6
II + III	3.6	7.4	5.7	10.4	8.8	3.6	10.5				37.9	14.0 52.0
III	1.2	1.3	1.4	2.0	3.8	3.8	3.0				9.6	6.8 16.4

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	10.1	24.3	27.9	33.8	77.8	114.0					27.5	114.0 28.7
IIIA	12.8	25.3	41.5	58.7	78.8	111.0	180.0				39.8	145.5 46.9
IIIB	15.0										15.0	15.0
IIIC											36.0	36.0
II + III	10.9	24.6	38.6	56.9	75.6	107.0	157.0				29.9	140.3 38.0
III	13.8	25.3	40.5	60.0	76.7	113.5	180.0				38.4	135.7 54.6

FREQUENCY OF OCCURRENCE												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	72	33	19	12	9	1					145	2 147
IIIA	14	8	6	6	7	1	2	1			41	4 45
IIIB	4	2	1		1						8	8
IIIC												
II + III	70	31	19	20	13	4	6	1			159	11 164
III	12	7	6	7	6	2	2				38	4 42

TOTAL TIME IN EACH DURATION HOURS AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	12.1	13.0	12.1	11.3	11.3	1.9					59.7	3.9 63.6
IIIA	2.7	3.4	4.1	5.8	9.2	1.9	9.9	4.0			24.4	11.2 35.6
IIIB	1.0	.9	.7		1.1						9.7	9.7
IIIC											.6	.6
II + III	12.8	12.2	12.3	18.9	16.2	7.0	19.2	4.0			72.4	26.2 98.6
III	2.6	3.0	4.2	6.5	7.6	3.8	9.9				25.9	9.1 35.0

AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS												
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90 91-ALL 1-ALL
II	10.1	23.7	38.1	56.8	75.2	114.0					24.7	177.0 29.8
IIIA	11.7	25.0	41.2	57.7	79.1	111.0	190.5	240.0			35.7	167.3 43.0
IIIB	15.0	27.3									27.6	27.6
IIIC											36.0	36.0
II + III	11.6	23.9	38.7	56.7	74.9	104.8	132.2	240.0			28.4	142.9 36.1
III	12.9	25.3	41.7	52.9	76.0	113.5	190.5				27.7	156.3 47.1

62.00